South Carolina Beekeepers Spring Meeting - The South Carolina Beekeepers will hold their spring meeting Saturday, March 6, at Bee City which is located along the Edisto River near Cottageville (Colleton County). Registration will begin at 8:00 AM and the meeting program will get under way at 8:30. Meeting registration cost is $2 per person or $3 per family. Tickets for the lunch meal will be available at the registration desk for $6/plate (Barbecue/Catfish Buffet).

Bee City is nationally known for its attractions including a honey bee farm, petting zoo, gift shop and now a cafe which opened in 2003. Bee City is a complete one-day getaway destination for young and old alike. Owners Archie and Diane Biering have an impressive number of antiques on display which will likely bring back some old memories. Also remember to bring along a few extra $ for the unique gift shop.

An exciting program is planned for this meeting including South Carolina Department of Agriculture Commissioner Charles Sharp who will give us an update on the status of SC Agriculture. Commercial beekeeper Mike Cooler from Hardeeville (Jasper County) will give a talk on his operation “Bee World Farms.” Workshops will include a tour of “Bee City Petting Zoo” by Archie Biering, a demonstration on making beeswax products in the Bee City wax works room by Diane Biering, and a workshop on how to control varroa mites and trap small hive beetles by Mike Hood. See other offerings as listed in the program later in this newsletter.

For directions from the upstate to Bee City, take I-26 East through Columbia. Stay on I-26 till you reach I-95 (exit 169A). On I-95 South, take exit 68 and go East on SC Hwy. 61 for 13.5 miles. You will see a Bee City sign on left of road. Take this left onto Bittersweet Lane which is an unpaved road leading to Bee City. From York or Lancaster counties, take I-77 south to Columbia and get on I-26 East and follow directions as given above. From Florence county, take I-95 South to exit 68 and follow directions above. From Aiken or Bamberg, take US 78 East from Bamberg and take a right onto SC Hwy. 61 East. Bee City will be located 13.5 miles past I-95.

For those beekeepers needing overnight lodging, there are several options on I-95 at Exit 77 (Branchville/St. George exit) which is approximately a 50 minute drive from Bee City. Accommodations available at this exit are: Best Western (843-563-2277) $45/Contl. Bkfst, Econo Lodge (843-563-4195) $40/Contl Bkft, Quality Inn (843-563-4581) $50/Contl. Bkft, Super 8 (843-563-5551) $38/Contl. Bkft. Other accommodations are available on I-26 at the Orangeburg exit 145A, which is approximately a 50 minute drive to Bee City. Hotels include Days Inn (803-531-2590) $59/Contl Bkft, Sleep Inn (803-531-7200) $70/Contl. Bkft, Holiday Inn Express (803-539-2900) $80/Contl. Bkft. For RV accommodations, call Shuman’s R.V. Trailer park (843-538-8731) which is near Bee City.

All beekeepers or anyone interested in honey bees are invited to attend for a good time of education and fellowship. For further meeting information, call Mike Hood, Extension Apiculturist, Department of Entomology, Clemson University (ph. 864-656-0346 or email <mhood@clemson.edu>) or Archie and Diane Biering at Bee City (ph. 843-835-5912).

Other News - The newest South Carolina local beekeepers association, the “Aiken County Beekeepers,” will host a Master Beekeeper Program certified level short course this winter. The course will begin on 9 February and will be taught through 8 March in Aiken. Call Extension Agent Suzanne Holmes (803-649-6671) for details. Other 1-2 days introductory beekeeping short courses will be offered in other regions of the state. Details will be announced at our state meeting on 6 March 2004.

Small Hive Beetle - South Carolina will request a 2004 renewal for a section 18 label for Check Mite + Beehive Pest Control Strip (Al. 10% Coumaphos) for small hive beetle and varroa mite control. Also, a request for Apilife VAR will be submitted for renewal of a section 18 label for...
varoa mite control. Currently, there are no EPA registration numbers for these products. All applicable directions, restrictions, and precautions on the proposed product labels submitted by the state must be followed. The renewal request should be granted soon and will last for the 2004 treatment year. This will be the fifth and second year respectively that South Carolina has sought and received the use of Check Mite + and Apilife VAR. The decision of whether future requests for this use are approved will depend, in part, on progress made towards registration and proper use of the products by beekeepers. We thank Tim Drake and other members of the Clemson University Department of Pesticide Regulation and Public Services for the role they play in processing our registration package request for these Section 18 label products.

Small hive beetle have now been confirmed in all but 4 South Carolina counties which are Abbeville, Greenwood, Marlboro, and Union Counties. In all likelihood the beetles have spread to managed or feral honey bee colonies in these counties also but this fact has not been confirmed. If you keep bees in either of these 4 counties and you find beetles in your colonies, I’d be interested in receiving a sample of 10 adults beetles in a small vial of alcohol from you. You may deliver the samples to your local Clemson University County Extension office for shipment to me. A big “Thank You” to all beekeepers who have assisted me with the South Carolina Small Hive Beetle Survey.

**McCALL APPOINTED TO NATIONAL HONEY COMMITTEE**

On December 15 Agriculture Secretary Ann M. Veneman announced the appointments of 14 members to the National Honey Nominations Committee. Members’ terms start immediately and end on June 20, 2006. This committee nominates individuals for appointment to the National Honey Board.

Newly appointed committee members are Virginia Stephens Webb of Clarksville, GA; Becky Tipton of Meriden, KS; Mary E. Klein of St. Charles, MI; James Daniel Rodenberg of Wolf Point, MT; Christine Thacker Alley of Lebanon, OH; Harvey Price of Wetumka, OK; Willie (W.C.) McCall of Seneca, SC; Barry Richards of Cross Plains, TN; and Ann Harman of Flint Hill, VA.

Committee members that are reappointed include Wayne Vandre of Anchorage, AK; John S. Tulloch of Odessa, DE; Don Moore of St. James, MT; George K. Hansen of Colton, OR; and Alan (A.J.) Howery of Darlington, WI.

The Honey Board administers the industry-funded national research, promotion, and consumer information program designed to increase demand for honey and honey products in the United States and abroad.

(Editors Note: Clyde McCall is the current president of the South Carolina Beekeepers.)

**SOURCE: Daily Journal/Daily Messenger.**

**HONEY PRICES MAY PUT STING ON BEEKEEPERS**

Food Manufacturers Could Switch to Cheaper Syrup in Their Recipes

The honey industry is in a sticky situation.

U.S. honey prices have climbed as high as $1.75 a pound this year, thanks to last year’s poor crop and the impact of import tariffs. Though that’s bad news for bakers, it’s good news for U.S. beekeepers who have struggled in recent years to turn a profit.

Beekeeper Jimmy Rewis, 55 years old, of the self-proclaimed honeycomb capital of Homerville, Ga., recently traded in two Ford pickup trucks for newer ones. He isn’t exactly getting rich, though, since costs such as land leases and fuel have gone up. But, he says, the $1.30-a-pound price he received for his honey this year has “got our head above the water.”

The golden era of high honey prices, however, may end soon. A good summer crop and a renewed flood of imports could send prices plummeting closer to $1 a pound by fall. Florida beekeepers already have seen prices dip as low as $1.17.

“At the moment, they are getting prices for their honey that they probably didn’t dream they were going to get," says Dr. Eric Mussen, extension apiculturist at the University of California at Davis. But, he says, "I doubt it’s going to stay as high as it is now."

For decades, the price of honey in the U.S. buzzed around 50 cents a pound. Annual U.S. consumption has grown as the population has increased, to about 382 million pounds in 2002 from about 300 million pounds a decade ago.

Last year, though, a summer drought in the Midwest and Great Plains regions decreased domestic production, helping to drive prices higher earlier this year. Last year, honey averaged $1.29 a pound, up 83 percent from 70.4 cents in 2001, according to the National Agricultural Statistics Service of the U.S. Department of Agriculture.

The rest of U.S. demand is supplied by imports, which until recently came mostly from Argentina and China. But domestic beekeepers claimed the countries were dumping honey on the U.S. market at below-market prices. In May 2001, the U.S. Commerce Department agreed and assessed new tariffs on both countries. In addition, a controversy over antibiotics in Chinese honey slashed imports further.

Last year, Argentina and China provided just 16 percent of U.S. imports, and Canada, Mexico, Brazil, Chile and Vietnam rushed in to fill the void.
Food-manufacturing companies, remembering how prices spiked and then fell in the mid-1990s when tariffs were first assessed on Chinese honey, tried to prepare for price increases. Some even put honey in reserve. So far, most manufacturers have swallowed the higher prices. "They've sort of decided to bite the bullet to keep their customers happy," said Bob Bauer, executive vice president of the National Honey Packers & Dealers Association.

Now, industry insiders say the holdover stock is dwindling rapidly, and if the price of honey doesn't fall enough, food manufacturers may have to change their recipes to syrup from honey or face the prospect of increasing their honey-product prices. A Kellogg Co. spokeswoman said the company hasn't changed any recipes, but declined to elaborate further. General Mills Inc. and Kraft Foods Inc. declined comment on their honey strategies.

Gene Grabowski, spokesman for the Grocery Manufacturers of America, says some food makers have changed their honey use, but the shift hasn't been widespread.

Whether honey prices fall back may depend, in part, on the interest in Chinese honey. Last year, the European Union discovered chloramphenicol, an antibiotic and unapproved food additive, in honey from China. Canada and the U.S. halted China's honey imports in response.

China says it has fixed the problem through a controversial method called ultrafiltration, which basically strips away harmful substances.

But U.S. beekeepers say the process does more than remove the antibiotic. Some say the product is more akin to "sugar water" than honey because it lacks some of the proteins of regular honey. "It's no longer honey," says Jerry Probst, chief executive officer of the Sioux Honey Association of Sioux City, Iowa. "It's been altered dramatically."

The Food and Drug Administration says ultrafiltered honey must be labeled as a "sweetener derived from honey."


**Candle and Soap Book Recall**


SOURCE: Bee Culture Magazine Archives

**Honey Trees for Flood Plains: USDA Announces Sign-Up for Hardwood Tree Initiative to Restore Up to 500,000 Acres of River Floodplains**

Agriculture Secretary Ann M. Veneman announced that the sign-up for a Conservation Reserve Program (CRP) initiative to restore up to 500,000 acres of floodplains by planting bottomland hardwood trees on private lands, authorized by the 2002 Farm Bill began on December 1, 2003. "This is an unprecedented opportunity to help improve our environment through the sequestration of over one million metric tons of greenhouse gases," said Veneman. "This initiative will help restore critical wildlife habitat, while improving water quality and reducing the impacts of floods."

"States are allocated specific amounts of acreage based on their pro-rate share of eligible acreage to ensure nationwide protection of vital floodplains," said Deputy Agriculture Secretary James Moseley during a visit here to Riva Ridge Farm that commenced two days of visits in Mississippi which also featured stops at Alcorn State University. Bottomland hardwoods are streamside forest trees, including oak, maple, ash, cypress and tupelo. These trees grow generally on lands that are periodically flooded. The initiative will protect against future flood damage by slowing the flow of water and shoring up soil. Each enrolled site will be restored to an ecologically diverse forest type. Eligible land must be located within a 100-year floodplain, comprised of primarily wetland soils and adjacent to permanent rivers and streams. States are allocated specific amounts of acreage based on their pro-rata share of eligible acreage, which will ensure nationwide protection of vital floodplains. While farmers and ranchers within most states may be eligible, the initiative is especially targeted towards states in the Mississippi, Missouri and Ohio River valleys and the southern coastal plain. The breakdown of allocated acreage per state is as follows: Alabama, 5,000; Alaska, 0; Arizona, 0; Arkansas, 20,000; California, 4,000; Colorado, 150; Connecticut, 300; Delaware, 150; Florida, 450; Georgia, 2,000; Guam, 0; Hawaii, 400; Idaho, 450; Illinois, 75,000; Indiana 12,000; Iowa, 68,000; Kansas, 24,000; Kentucky, 3
5,000; Louisiana, 30,000; Maine, 150; Maryland, 900; Massachusetts, 150; Michigan, 4,000; Minnesota, 17,000; Mississippi, 50,000; Missouri, 75,000; Montana, 900; Nebraska, 10,000; Nevada, 0; New Hampshire, 300; New Jersey, 150; New Mexico, 0; New York, 900; North Carolina 23,000; North Dakota, 1,000; Ohio, 8,000; Oklahoma, 1,000; Oregon, 2,000; Pennsylvania, 5,000; Puerto Rico, 150; Rhode Island, 0; South Carolina, 2,000; South Dakota, 3,000; Tennessee, 23, 000; Texas, 5,000; Utah, 150; Vermont, 150; Virginia, 600; Washington, 2,000; West Virginia, 2,000; Wisconsin, 5,000; Wyoming, 600; and Reserve, 10,000 for a total of 500,000 acres. Program participants will receive 50 percent of the cost to establish the trees, an annual rental payment for 14 to 15 years, and technical assistance to plant the trees. Participants will also retain their right to sell or market their carbon-sequestered gains (often referred to as credits) that are produced from bottomland hardwoods, or other environmental credits, to energy companies or whomever they choose. Sign-up for the hardwood tree initiative is on a continuous basis, meaning eligible land may be enrolled at any time beginning December 1, 2003 at local Farm Service Agency (FSA) offices. Additional information on the hardwood tree initiative and other CRP programs is available on FSA’s Web site at: http://www.fsa.usda.gov/dafp/cepd/crpinfo.htm.

SOURCE: Catch The Buzz.

GENE EXPRESSION TIED TO SOCIAL BEHAVIOR IN HONEY BEES

Genes and behavior go together in honey bees so strongly that an individual bee's occupation can be predicted by knowing a profile of its gene expression in the brain, say researchers at the University of Illinois at Urbana-Champaign.

This strong relationship surfaced in a complex molecular study of 6,878 different genes replicated with 72 cDNA microarrays that captured the essence of brain gene activity within the natural world of the honey bee (Apis mellifera). Even though most of the differences in gene expression were small, the changes were observable in 40 percent of the genes studied, the scientists report in the October 10 issue of the journal Science. "We have discovered a clear molecular signature in the bee brain that is robustly associated with behavior," said principal researcher Gene E. Robinson, a professor of entomology and director of the Neuroscience Program at Illinois. "This provides a striking picture of the genome as a dynamic entity, more actively involved in modulating behavior in the adult brain than we previously thought."

Microarrays let researchers get a broad view of gene activity by generating simultaneous measurements of messenger RNA, which reflects levels of protein activity. The mRNA binds to specific sites on the array, allowing for the measurement of expression from thousands of genes. Robinson, who also holds the G. William Arends Professorship in Integrative Biology at Illinois, and colleagues generated mRNA profiles from 60 different bees who were working either as nurses (taking care of the brood within the hive) or foragers (gathering food outside). A computer program was able to use the profiles to determine correctly, for 57 of 60 of the bees, which individual belonged to what group. Behavioral differences between nurses and foragers are part of an age-related, socially regulated division of bee labor. Nurses perform caregiving duties for their first two to three weeks of life, then shift to foraging for nectar and pollen. As the behavioral transition occurs the bees experience changes in brain structure, brain chemistry, and, as this new study shows, many changes in gene expression.

Robinson, whose research is part of a federally funded project to sequence the honey bee genome, has long been interested in the mechanisms involved in honey bee division of labor as a model to understand the relationships between genes, brain and behavior.

After an initial analysis showed differences between nurses and foragers, the researchers faced the problem of relating these differences to either age or behavior, because foragers are both behaviorally different and older than nurses. So Robinson and colleagues created colonies consisting entirely of same-aged bees. In the absence of older bees, some individuals in a hive will begin foraging up to two weeks earlier than usual while others will grow up normally and act as nurses, making for age-matched young nurses and foragers. Age-matched old foragers and old nurses also were obtained from these colonies. A dominant pattern of gene expression emerged, and it "was clearly associated with behavior," the researchers wrote.

Since precocious foraging is a response to the shortage of foragers, this finding indicates that the genome is responding dynamically to changes in the bee's social environment, Robinson said. The study was unique, he said, because if focused on individual profiles. Previous studies of gene expression and behavior in mice and flies, for instance, have focused on group tendencies, looking at pools of individuals.

Robinson's colleagues on the paper were Charles W. Whitfield, a postdoctoral researcher in the department of entomology, and undergraduate Anne-Marie Cziko. The research was funded by a National Science Foundation Postdoctoral Fellowship in Bioinformatics to Whitfield and by grants from the University of Illinois Critical Research Initiatives Program and Burroughs Wellcome Trust.

HONEY CUTS FORMATION OF CANCER-CAUSING COMPOUNDS IN GRILLED MEAT AND PROMOTES GROWTH OF A PROBIOTIC BACTERIA IN YOGURT

Two studies presented by Michigan State University researchers at the 12th World Congress of Food Science meeting in Chicago demonstrated that the addition of honey to food products – marinades and yogurt – may provide value-added benefits, in addition to flavor.

According to lead investigator Dr. Zey Ustunol, the studies are helping support the theory that honey has some valuable functional properties in addition to the obvious one of adding sweet flavor. Honey is a complex mixture of sugars and other compounds, and the studies are designed to better understand how they interact.

Honey is commonly added to meat marinades for flavor and to aid in browning and glaze formation. Researchers found that honey-containing marinades also effectively limited the production of potential cancer-causing compounds called heterocyclic aromatic amines (HAAs) when marinated steak and chicken were fried. HAAs are formed when meat is cooked at high temperatures and the meat begins to char or blacken. Marinating meat for four hours in marinades containing 30% honey significantly reduced HAA formation.

In the same lab, investigators are testing honey’s ability to support the growth of beneficial microorganisms in yogurt called probiotics. Honey’s unique carbohydrate composition includes primarily monosaccharides glucose and fructose, but also about 5% oligosaccharides. Oligosaccharides are known to support the growth of probiotics such as Bifidobacterium bifidum (Bf-1), believed to aid in gastrointestinal health. When 5% honey, sucrose and corn syrup were compared, honey enhanced the growth of B. bifidum over the other sugars. When added at 10%, honey enhanced B. bifidum growth similarly to the oligosaccharide source inulin.

#836: Influence of honey containing marinades and marinating time on formation of heterocyclic aromatic amine formation and overall mutagenicity of fried beefsteak and chicken, by HS Shin and Z Ustunol, presented Thursday, July 17, 2003.

#1117: Influence of honey from different floral sources on growth, acid production by yogurt cultures: A comparison to sucrose, high fructose corn syrup and inulin, by D Popa and Z Ustunol, presented Friday, July 18, 2003.

SOURCE: National Honey Board.

SMALL-SCALE LOANS THROUGH FINCA

The Foundation for International Community Assistance has an innovative program consisting of small loans, starting at $50, enough to get started in beekeeping in most areas of the world. The program reminds me of the idea that giving a man a fish will feed him once, but training him to fish has the potential to feed him forever. FINCA’s principles encompass trusting the poor; a self-employment loan, not a gift; self-sufficiency through savings, lending to women; and individual and group employment. See the results of FINCA’s work at http://www.villagebanking.org.


IN MEMORY

Lt. Col. Paul LeRoy


Paul was a 1954 graduate of Clemson University and a retired US Army pilot serving 2 tours in Vietnam. Not only was he a devoted family man, he was dedicated to his community serving in many different capacities. He served on the Board of Trustees at John de la Howe School, he was active in the American Legion, VFW, American Forestry Association, South Carolina Beekeepers Association, Lakelands Beekeepers Association, and the Historical Society of McCormick.

Paul was instrumental in founding the Lakelands Beekeepers Association in 2000 which is based in Greenwood where he served as the association’s first President. He was a long time member of the South Carolina Beekeepers Association and was serving his second year term as a regional director on the association’s executive committee.

Surviving Paul is his wife of 50 years, Barbara A. LeRoy of the home; a daughter, Sherry Palmese and her husband Eddie of Augusta; a son, Steve LeRoy and his wife Debbie of Chesapeake, VA; a brother John L. LeRoy of Calhoun Falls, and five grandchildren.
8:00 a.m.  Registration & Coffee
Meeting Registration Fee - $2/person or $3/family
Meal Tickets - $6

8:30  Invocation - Carl Johnson, Member - Low Country Beekeepers Association
Welcome & President's Comments & Business Meeting - SCBA President Clyde McCall
Introductions & Announcements - Mike Hood, Exec. Sec. SCBA

8:55  Welcome to Bee City - Archie & Diane Biering

9:15  South Carolina Agriculture Update - Commissioner Charles Sharp, SC Department of Agriculture

9:45  Results of the 2003 SC Beekeeping Survey - Mike Hood, Extension Bee Specialist

10:15  Break

10:40  Door Prizes

10:45  "Bee World Farms - How We Do It" - Mike Cooler, Hardeeville, SC

11:15  Panel Discussion - Panel of Senior South Carolina Beekeepers
(Bring along a few good questions for the panel)

12:00  Lunch at Bee City (Barbecue/Catfish Buffet - $6)

1:15 p.m.  Door Prizes and Workshop Introduction

Workshops - 50 minutes each - Beginning at 1:30, 2:20 and 3:10

1.  Tour of Bee City - Archie Biering - By the Two Horses (outside)

2.  Beeswax Products - Diane Biering - In Wax Works Room

3.  Small Hive Beetle and Varroa Mite Control - Mike Hood - In Meeting Hall

4:00  END - Have a Safe Trip Home & See You in Clemson on July 15-17.

SCBA Executive Committee Meeting Following
RECIPES

**Lemon Brunch Parfaits**
Prep: 20 minutes

1 1/2 cups fat-free milk  
1/8 teaspoon salt  
2/3 cup quick-cooking couscous  
1 cup lemon low-fat yogurt  
1 cup light dairy sour cream  
2 tablespoons honey  
1/2 teaspoon finely shredded lemon peel  
6 cups assorted fruit (such as sliced strawberries, kiwifruit, nectarines, or star fruit; and/or blueberries, or raspberries)  
Chopped crystallized ginger (optional)  
Fresh Mint (optional)

In a medium saucepan bring milk and salt to boiling. Stir in couscous; reduce heat. Simmer, covered, for one minute. Remove from heat; let stand for 5 minutes. Stir with a fork until fluffy. Cool.

In a small bowl combine yogurt, sour cream, honey, and lemon peel. Stir into couscous. In a large bowl combine desired fruit.

To serve, divide half of the fruit mixture among 12 parfait glasses. Spoon couscous mixture over fruit; top with remaining fruit. If desired, garnish with crystalized ginger and mint. Makes 12 servings.

**SOURCE:** Publix Holiday Entertaining Flyer

**Apricot-Apple Sippers**
Prep: 20 Minutes  
Chill: 8 hours  
4 cups apple cider or apple juice  
4 cups apricot nectar  
2 tablespoons lemon juice  
2 tablespoons honey  
4 inches stick cinnamon, broken  
Strawberries (optional)

In a large saucepan combine apple cider, apricot nectar, lemon juice, honey, and cinnamon sticks. Bring to boiling; reduce heat. Simmer, covered, for 10 minutes. Cool cider mixture. Cover and chill for 8 to 24 hours. Pour into 10 glasses. If desired, garnish each drink with a strawberry. Makes 10 (6-ounce) servings.

**SOURCE:** Publix Holiday Entertaining Flyer

**Fruited Cottage Cheese**
1 cup Breakstone's or Knudsen Low Fat Cottage Cheese  
1/2 cup dried mixed fruit bits  
1 tsp honey

Mix all ingredients until well blended. Special Extra: Add Planters Slivered Almonds for extra crunch.

**SOURCE:** http://www.kraftfoods.com

**Honey Dijon Chicken**
Prep/Cook Time: 20 minutes

Chicken breasts simmer quickly in a honey & mustard-spiked cream sauce and are served over rice and garnished with chopped pecans.

1 tbsp. butter or margarine  
4 chicken breat halves  
1 can Campbell's® Cream of Chicken Dijon Soup  
1/2 cup milk  
2 tbsp. honey  
4 cups hot cooked rice  
1/4 cup chopped toasted pecans or walnuts


**SOURCE:** http://www.campbellkitchen.com

Respectfully submitted,

William Michael Hood  
Extension Apiculturist

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**2004 Calendar**

**March 6, 2004**  
SC Beekeepers Spring Meeting  
Bee City, Colleton County, Cottageville, SC

**March 19-20, 2004**  
NC State Beekeepers Spring Meeting  
New Bern, NC

**July 8-10, 2004**  
NC State Beekeepers Summer Meeting  
Charlotte, NC

**July 15-17, 2004**  
SC Beekeepers Summer Meeting  
Clemson, SC

**August 9-13, 2004**
Please mail your change of address to: News for SC Beekeepers, Tammy P. Morton, 116 Long Hall, Clemson University, Clemson, SC 29634-0315.

Name: ____________________________________________________________

Address: _____________________________________________________________________

County: ________________________      Phone ( ) ___________________